dividing the ultrasonic transducer elements into multiple blocks, where 'p' ultrasonic transducer elements are illuminated by an acoustic signal, where 'p' ≤ 'n';

repeatedly sampling signals received by 'p' ultrasonic transducer elements at a specific scanning frequency;

forming sample data for the blocks for a scanning cycle, where a scanning cycle is dependent on a wavelength of the acoustic signal;

selecting sample data; and

forming the receiving beams using the selected sample data.

2. (Amended) The receiving beam-forming method according to claim 26, wherein the signals received by the 'p' ultrasonic transducer elements are pulse signals whose pulselength is shorter than the extent of the 'n' ultrasonic transducer elements arranged in the predetermined form as measured along the direction of a receiving beam.

3. (Amended) The receiving beam-forming method according to claim 26, wherein the acoustic signal is composed of growing waves whose amplitude gradually increases or damped waves whose amplitude gradually decreases.

4. (Amended) The receiving beam-forming method of claim 26, wherein the arc is obtained by selecting an arc-shaped part of a cylindrical form, wherein the receiving beam-forming direction is rotated by switching the selection of the arc-shaped part of the cylindrical form.

6. (Amended) The receiving beam-forming method according to claim 27, wherein the acoustic signal is composed of pulse signals whose pulselength is shorter

than the extent of the 'n' ultrasonic transducer elements as measured along the direction of a receiving beam.

7. (Amended) The receiving beam-forming method according to claim 27, wherein the acoustic signal is composed of growing waves whose amplitude gradually increases or damped waves whose amplitude gradually decreases.

8. (Amended) The receiving beam-forming method according to claim 27, wherein selection of the scanning cycles for the individual blocks is altered according to the angle between the direction of the receiving beam and the ultrasonic transducer elements arranged in the linear form.

9. (Amended) A receiving beam-forming method comprising:

arranging 'n' ultrasonic transducer elements into a predetermined form;

dividing the plurality of ultrasonic transducer elements into multiple blocks, where 'p' ultrasonic transducer elements are illuminated by an acoustic signal, where 'p' $\leq$ 'n';

repeatedly sampling signals received by 'p' ultrasonic transducer elements at a specific scanning frequency;

forming sample data for the blocks for a scanning cycle, where a scanning cycle is dependent on the scanning frequency;

storing said sample data; and

forming a receiving beam in a specific direction using selected sample data.

10. (Amended) A receiving beam-forming apparatus comprising:

a multiplexer which multiplexes echo signals received by multiple ultrasonic transducer elements arranged in a predetermined form on a receiving transducer,

where the echo signals are multiplexed into a number of signal lines, where the number of signal lines is less than the number of the ultrasonic transducer elements;

an A/D converter which repeatedly samples the echo signals received by the individual ultrasonic transducer elements at a specific scanning frequency and outputs complex-valued sample data; and

a signal processor which divides the multiple ultrasonic transducer elements into multiple blocks, selects the sample data derived from different scanning cycles for the blocks, where a scanning cycle is dependent on the scanning frequency, and forms the receiving beams using the selected complex-valued sample data.

11. (Amended) The receiving beam-forming apparatus of claim 10, wherein the predetermined form is an arc, wherein the arc is obtained by selecting an arc-shaped part of a cylindrical form, wherein a receiving beam-forming direction is rotated by switching the selection of the arc-shaped part of the cylindrical form, wherein a receiving beam-forming direction is rotated by switching the selection of the arc-shaped part of the cylindrical form.

19. (Amended) A receiving beam-forming apparatus comprising:

a plurality of ultrasonic transducer elements arranged on a predetermined form;

a plurality of ultrasonic transducer elements receiving echo signals, where the transducer elements are sampled at a specific scanning frequency, forming sample data for a scanning cycle, where a scanning cycle is dependent on the scanning frequency;

a memory which stores the sample data from multiple scanning cycles; and

a beamformer which forms a receiving beam in a specific direction using the sample data.

20. (Amended) A receiving beam-forming apparatus which repeatedly samples echo signals received by multiple ultrasonic transducer elements at a specific scanning frequency and forms a receiving beam using sample data obtained by sampling the echo signals in multiple scanning cycles, where a scanning cycle is dependent on the scanning frequency.

Please add the following new claims:

--26. (New) The method of claim 9 further comprising the step of producing a continuous sample data train by shifting the phase of the sample data for the blocks;

27. The apparatus of claim 19 further comprising a sampling plane generator, which produces a continuous sample data train of a sampling plane corresponding to a specific angle, where the specific angle is obtained by shifting the phase of or interpolating the sample data from the multiple scanning cycles

28. (New) The method of claim 1, wherein the predetermined form is an arc.

29. (New) The method of claim 1, wherein the predetermined form is linear.

30. (New) The method of claim 9, wherein the predetermined form is an arc.

31. (New) The method of claim 9, wherein the predetermined form is linear.

32. (New) The apparatus according to claim 10, wherein the predetermined form is an arc.

33. (New) The apparatus according to claim 10, wherein the predetermined form is linear.--